Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS

Conditional Major, Operating
Permit: F-17-004 R2
Curtis-Maruyasu America, Inc.
Lebanon, KY 40033
April 5, 2021
Jonathon Hughes, Reviewer

SOURCE ID:	21-155-00021
AGENCY INTEREST:	2896
ACTIVITY:	APE20210001

SOURCE DESCRIPTION:

On November 18, 2016 the Division received an application from Curtis - Maruyasu America, Inc. for the renewal of their Conditional Major permit to operate a fuel and brake tubing manufacturing facility located in Lebanon. The manufacturing process consists of three processes: Tube Mill processing, Coating Processing, and Powertrain Coating Processing. In the Tube Mill processing strips of steel are formed into single-walled tubes (SWT) or double-walled tubes (DWT). The coating process has the SWT or DWT coated in one or a combination of the following: Zinc electroplating, Chromate conversion coating, Nylon or Plastic extrusion, or application of primer and two coats of paint. The Powertrain coating process can have a SWT going one or more of the following coatings: an electroplating of Zinc-Nickel, Chromate conversion coating, or Tin-Zinc electroplating.

The source is potentially major source for VOC and HAP emissions. The source took limits to become conditional major for single HAP and combined HAPs emissions as well as VOC emissions. The source has requested to have single HAP and combined HAPs and VOC emission limits of 9 and 22.5 and 90 tons per a year, respectively.

REVISION 2, SIGNIFICANT REVISION:

On March 19, 2021 the Division received an application from Curtis - Maruyasu America, Inc. to request removal of the requirement to operate RTO #2 which controls volatile emissions from EP 30, Single-Walled Tube Coating. There are no applicable regulations for the facility that mandates the use of an RTO with EP 30 for compliance. The facility estimates that projected annual VOC emissions from EP 30 would increase 33 tpy when RTO #2 is shut down. The summary table below outlines the actual source-wide VOC emissions including the emissions from EP30 alone from 2015 through 2020. The source will continue to comply with the VOC and HAP limitations described in section D of the permit.

KY EIS EMISSIONS SURVEY FOR VOC EMISSIONS (TPY)

	2015	2016	2017	2018	2019	2020
Source-wide Controlled Emissions	27.53	15.73	10.59	8.63	8.17	8.17
Controlled Emissions from EP 30 only	1.046	1.271	1.013	0.671	0.269	0.269

Actual Uncontrolled Emissions from EP30	20.92	25.42	20.26	13.42	5.38	5.38
Emission Increase on EP30 after shutting down RTO #2	19.874	24.149	19.247	12.749	5.111	5.111

REVISION 1, MINOR REVISION:

On December 20, 2018 the Division received an application from Curtis - Maruyasu America, Inc. to request removal of the requirement to vent exhaust from EP 28 to RTO #1. There are no applicable regulations for the facility that mandates the use of an RTO with EP 28 for compliance. EP 11 will still be exhausted to RTO #1 and the facility shall operate RTO #1 while EP 11 is in operation. The source will continue to comply with the limitations described in section D of the permit.

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(uuuuu) 40 C.F.R. 63.11504 to 63.11512, Table 1 (Subpart WWWWWW), National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations applies to sources that operate a plating and polishing facility that is an area source of hazardous air pollutant emissions and meets the criteria specified in 40 CFR 63.11504.

401 KAR 52:030, Federally-enforceable permits for nonmajor sources applies to sources that accept permit conditions that are legally and practically enforceable to limit their potential to emit (PTE) below the major source thresholds that would make them subject to 401 KAR 52:020.

401 KAR 59:010, New process operations, is applicable to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

401 KAR 63:020, Potentially hazardous matter or toxic substances, applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances.

NON APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(h) 40 C.F.R. 63.340 to 63.348, Table 1 (Subpart N), National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks is not applicable, because there is no electrical current applied to the chromium conversion tanks.

PRECLUDED REGULATIONS:

401 KAR 52:020, Title V permits.

COMMENTS:

Emission Points

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
10	**DWT Line Primer Dip Booth and Curing Oven**				
	Primer Curing Oven	500000 BTU/HR Natural Gas	December 1996	None	None
	KP-Colour # 8452-Primer NC-3	4.8 lb/hr	December 1996	None	401 KAR 63:020
	KP-Colour # 8452-Thinner	5.8 lb/hr	December 1996	None	401 KAR 63:020
11	**DWT Line Fluoride Coating and Baking**				
	Paint Curing Oven	500000 BTU/HR Natural Gas	December 1996	RTO #1	None
	Paint Curing Oven	500000 BTU/HR Natural Gas	December 1996	RTO #1	None
	Chromate Conversion Coating	0.0154 gal/hr	December 1996	None	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
	Fuccaron # 3000 color	23.3 lbs/hr	December 1996	RTO #1	401 KAR 63:020
	Isophorone	3.1 lbs/hr	December 1996	RTO #1	401 KAR 63:020
28	**Nylon-Coated Tubing Line**				
	Chromate Conversion Coating	0.0154 gal/hr	April 2000	None	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
	KP-Colour # 8452-Primer NC-3	1.2 lb/hr	April 2000	None	401 KAR 63:020
	KP-Colour # 8452-Thinner	1.3 lb/hr	April 2000	None	401 KAR 63:020
30	**Single-Walled Tube**				
	KP-Colour # 8452-Primer NC-3	4.2 lb/hr	December 2006	None	401 KAR 63:020
	KP-Colour # 8452-Thinner	7.4 lb/hr	December 2006	None	401 KAR 63:020
	Fuccaron # 3000 color	23.3 lbs/hr	December 1996	None	401 KAR 63:020
	Isophorone	3.1 lbs/hr	December 1996	None	401 KAR 63:020
	Curing Oven	1000000 BTU/HR Natural Gas	December 2006	None	None
	Curing Oven	1000000 BTU/HR Natural Gas	December 2006	None	None
	Curing Oven	1000000 BTU/HR Natural Gas	December 2006	None	None
	Chromate	0.0154 gal/hr	December 2006	None	401 KAR 59:010

	Conversion Coating				40 CFR 63, Subpart WWWWWW
40	**CMA Powertrain Process Flow**				
	Nickel Electroplating	375 Amps/hr	August 2000	Packed Bed Scrubber #2	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
	Zinc Nickel Electroplating	1650 Amps/hr	August 2000	Packed Bed Scrubber #2	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
	Chromate Seal Batch Tank	375 Amps/hr	August 2000	Packed Bed Scrubber #2	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
	Chromate Seal Batch Tank	375 Amps/hr	August 2000	Packed Bed Scrubber #2	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
41	**Electroless Nickel Plating**				
	Nickel plating	840 units/hr	November 2014	Model HF-101 Series Scrubber	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
42	**ZnNi-2 Electroplating**				
	ZnNi-2 plating	560 units/hr	December 2014	Model HF-101 Series Scrubber	401 KAR 59:010 40 CFR 63, Subpart WWWWWW
43	**Powertrain Line Boiler**				
	York Shipley Natural Gas Boiler	5.234 mmBtu/hr	December 2014	None	401 KAR 59:015

TYPE OF CONTROL AND EFFICIENCIES:

Regenerating Thermal Oxidizer (RTO #1):
To control emissions (VOC/HAPs) from emission point 11

Emission Point 11 and RTO #1 have been idle. Permittee shall re-demonstrate compliance and submit test protocol to determine control efficiency of RTO #1 when Emission Point 11 is in operation

Control Efficiency:	95% tested on October 25, 2011
Rated capacity:	402000 Btu/hr
Fuel usage	Natural Gas
Construction Commenced:	March 2006

Regenerating Thermal Oxidizer (RTO #2):
This unit is authorized to be shut down with APE20210001, but will physically remain on site. Permittee shall submit an application and perform required testing if they choose to re-operate RTO #2
To control emissions (VOC/HAPs) from emission point 30

Control Efficiency:	Pending re-test for future operation
Rated capacity:	2700000 Btu/hr
Fuel usage	Natural Gas
Construction Commenced:	December 2006

Packed-Bed Scrubber #2:

To control emissions (PM/HAPs) from EP 40 Powertrain Process

Vertical Countercurrent Packed-Bed Scrubber with mist eliminator
95% Control Efficiency
Construction Commenced on August 2000

Insignificant Activities:

Emission Point	Description	Capacity	Control Device	Applicable Regulation
10	**DWT Line Primer Dip Booth and Curing Oven**			
	4.76 mm Copper Coated Tubing	0.4115 ton/hr	None	401 KAR 59:010
28	**Nylon-Coated Tubing Line**			
	6.35 mm Tubing	0.267 ton/hr	None	401 KAR 59:010
	8.0 mm Tubing	0.344 ton/hr	None	401 KAR 59:010
	10.0 mm Tubing	0.439 ton/hr	None	401 KAR 59:010
	Electroclean Tank	0.01 lb/hr	None	401 KAR 59:010
	Electroclean Tank	0.01 lb/hr	None	401 KAR 59:010
	Zinc Electroplating Tank	3450 Amps/hr	None	401 KAR 59:010
30	**Single-Walled Tube**			
	6.35 mm Tubing	0.267 ton/hr	None	401 KAR 59:010
	8.0 mm Tubing	0.344 ton/hr	None	401 KAR 59:010
	10.0 mm Tubing	0.439 ton/hr	None	401 KAR 59:010
	Electroclean Tank	0.01 lb/hr	None	401 KAR 59:010
	Electroclean Tank	0.01 lb/hr	None	401 KAR 59:010
	Zinc Electroplating Tank	2550 Amps/hr	None	401 KAR 59:010

Emission Point Miscellaneous Activities
Electric Powertrain vacuum furnace brazing
Manual Trim Saw
Electric Belt Brazing Furnace
Injection Molding Machines
32907 Paint Marking
Tube Ink Marking
Mineral Spirits Odorless-Nexco

EMISSION FACTORS AND THEIR SOURCE:
A combination of material balances, AP-42 emission factors, MSDS sheets and information from the source were used to estimate emissions.

Air Dispersion Modeling

The Division for Air Quality (Division) has performed air dispersion model screening of potentially hazardous substances (Ethyl Benzene, Glycol Ether, Methanol, Nickel, Xylenes) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

EMISSION AND OPERATING CAPS DESCRIPTION:

1. The source has accepted a facility-wide cap on annual VOC emissions of no more than ninety (90) tons per rolling 12-month period. Compliance with this allowable will be demonstrated by record keeping and emissions estimating methodology specified in the terms and conditions of the permit.

2. The source has accepted a facility-wide cap on annual individual HAP emission of no more than nine (9) tons per rolling 12-month period. Compliance with this allowable will be demonstrated by record keeping and emissions estimating methodology specified in the terms and conditions of the permit.

3. The source has accepted a facility-wide cap on annual combined HAPS emissions of no more than 22.5 tons per rolling 12-month period. Compliance with this allowable will be demonstrated by record keeping and emissions estimating methodology specified in the terms and conditions of the permit.

TESTING REQUIREMENTS:

For Scrubbers: Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

For RTO #1:

1. The permittee shall conduct a performance test on RTO #1 every 5 years when Emission Point 11 is in operation.
2. The permittee shall conduct the performance test when the thermal oxidizer is operating at a representative flow rate and representative inlet concentration.
3. The permittee must record information that is necessary to document thermal oxidizer operating conditions during the test and explain why the conditions represent normal operation.
4. The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature, this average combustion temperature is the minimum operating set point of the thermal oxidizer.

5. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

PERIODIC MONITORING:

Curtis-Maruyasu America, Inc. shall monitor VOC and HAPs emissions monthly.

OPERATIONAL FLEXIBILITY:

The source is not restricted as to hours of operation or quantity of product produced while remaining within the caps above.